



	/gene="p53"
	/number=1
<u>intron</u>	950..11688
	/gene="p53"
	/number=1
<u>repeat unit</u>	2581..2587
	/gene="p53"
	/note="5'-ALU flanking"
<u>repeat unit</u>	2588..2877
	/gene="p53"
	/rpt_family="ALU"
<u>repeat unit</u>	2890..2896
	/gene="p53"
	/note="3' ALU-flanking"
<u>repeat unit</u>	3915..3929
	/gene="p53"
	/note="3' ALU-flanking"
<u>repeat unit</u>	3950..4223
	/gene="p53"
	/rpt_family="ALU"
<u>repeat unit</u>	4224..4238
	/gene="p53"
	/note="5'-ALU flanking"
<u>repeat unit</u>	4319..4327
	/gene="p53"
	/note="5'-ALU flanking"
<u>repeat unit</u>	4328..4603
	/gene="p53"
	/rpt_family="ALU"
<u>repeat unit</u>	4631..4639
	/gene="p53"
	/note="3' ALU-flanking"
<u>repeat unit</u>	4786..5574
	/gene="p53"
	/note="rearranged cluster"
	/rpt_family="ALU"
<u>repeat unit</u>	5802..5811
	/gene="p53"
	/note="5'-ALU flanking"
<u>repeat unit</u>	5812..6100
	/gene="p53"
	/rpt_family="ALU"
<u>repeat unit</u>	6127..6136
	/gene="p53"
	/note="3' ALU-flanking"
<u>repeat unit</u>	6221..6236
	/gene="p53"
	/note="5'-ALU flanking"
<u>repeat unit</u>	6237..6517
	/gene="p53"
	/rpt_family="ALU"
<u>repeat unit</u>	6531..6546
	/gene="p53"
	/note="3' ALU-flanking"
<u>repeat unit</u>	6548..7812
	/gene="p53"
	/note="rearranged cluster"
	/rpt_family="ALU"
<u>repeat unit</u>	8703..8982
	/gene="p53"

repeat unit /rpt\_family="ALU"  
9087..9098  
/gene="p53"  
/note="5'-ALU flanking"  
repeat unit 9099..9377  
/gene="p53"  
/rpt\_family="ALU"  
repeat unit 9391..9402  
/gene="p53"  
/note="3' ALU-flanking"  
repeat unit 9513..10332  
/gene="p53"  
/note="rearranged cluster"  
/rpt\_family="ALU"  
repeat unit 11065..11069  
/gene="p53"  
/note="5'-ALU flanking"  
repeat unit 11070..11357  
/gene="p53"  
/rpt\_family="ALU"  
repeat unit 11374..11378  
/gene="p53"  
/note="3' ALU-flanking"  
exon 11689..11790  
/gene="p53"  
/number=2  
CDS join(11717..11790,11906..11927,12021..12299,13055..13238,  
13320..13432,14000..14109,14452..14588,14681..14754,  
17572..17678,18599..18680)  
/gene="p53"  
/codon\_start=1  
/product="protein p53"  
/protein\_id="CAA38095.1"  
/db\_xref="GI:35214"  
/translation="MEEPQSDPSVEPPLSQETFSDLWKLLENNVLSPLPSQAMDDL  
LSPDDIEQWFTEDPGPDEAPRMPPEAAPRVAPAPAAPTPAAPAPAPSWPLSSSVPSQKT  
YQGSYGFRLGFLHSGTAKSVTCTYSPALNKMFCQLAKTCVPQLWVDSTPPPGTRVRAM  
AIYKQSQHMTFVRRCPHHERCSDSGLAPPQHILIRVEGNLRVEYLDNRNTRHRSVVV  
PYEPPEVGSDCTTIHYNMCMSSCMGMNRRPILTIITLEDSSGNLLGRNSFEVRVCA  
CPGRDRRTEENLRKKKGEPHHELPPGSTKRALPNNTSSSPQPKKKPLDGEYFTLQIRG  
RERFEMFRELNEALELKDAQAGKEPGGSRAHSSHLKSKKGQSTSRHKKLMFKTEGPDS  
D"  
intron 11791..11905  
/gene="p53"  
/number=2  
exon 11906..11927  
/gene="p53"  
/number=3  
intron 11928..12020  
/gene="p53"  
/number=3  
exon 12021..12299  
/gene="p53"  
/number=4  
intron 12300..13054  
/gene="p53"  
/number=4  
repeat unit 12588..12597  
/gene="p53"  
/note="5'-ALU flanking"

<u>repeat_unit</u>	12598..12882 /gene="p53" /rpt_family="ALU"
<u>repeat_unit</u>	12901..12910 /gene="p53" /note="3' ALU-flanking"
<u>exon</u>	13055..13238 /gene="p53" /number=5
<u>intron</u>	13239..13319 /gene="p53" /number=5
<u>exon</u>	13320..13432 /gene="p53" /number=6
<u>intron</u>	13433..13999 /gene="p53" /number=6
<u>repeat_unit</u>	13617..13630 /gene="p53" /note="5'-ALU flanking"
<u>repeat_unit</u>	13631..13913 /gene="p53" /rpt_family="ALU"
<u>repeat_unit</u>	13930..13943 /gene="p53" /note="3' ALU-flanking"
<u>exon</u>	14000..14109 /gene="p53" /number=7
<u>intron</u>	14110..14451 /gene="p53" /number=7
<u>exon</u>	14452..14588 /gene="p53" /number=8
<u>intron</u>	14589..14680 /gene="p53" /number=8
<u>exon</u>	14681..14754 /gene="p53" /number=9
<u>intron</u>	14755..17571 /gene="p53" /number=9
<u>repeat_unit</u>	15171..16491 /gene="p53" /note="rearranged cluster" /rpt_family="ALU"
<u>repeat_unit</u>	16633..17397 /gene="p53" /note="rearranged cluster" /rpt_family="ALU"
<u>exon</u>	17572..17678 /gene="p53" /number=10
<u>intron</u>	17679..18598 /gene="p53" /number=10
<u>repeat_unit</u>	18076..18091

```

/ gene="p53"
/ note="5'-ALU flanking"
repeat_unit 18092..18371
/ gene="p53"
/ rpt_family="ALU"
repeat_unit 18389..18404
/ gene="p53"
/ note="3' ALU-flanking"
exon 18599..19876
/ gene="p53"
/ number=11
repeat_unit 19424..19431
/ gene="p53"
/ note="3' ALU-flanking"
repeat_unit 19431..19752
/ gene="p53"
/ rpt_family="ALU"
repeat_unit 19753..19760
/ gene="p53"
/ note="5'-ALU flanking"
BASE COUNT      5246 a    4970 c    5107 g    4980 t
ORIGIN
  1 ttcccatcaa gccctagggc tcctcgtggc tgctgggagt tgtagtctga acgcttctat
 61 cttggcgaga agcgccctac ctcccctac cgagtcgccg ggtaattctt aaagcacctg
121 caccgcccc cgcgcgcctg cagaggcgcg agcagggtctt gcacctcttc tgcattctcat
181 tctccaggct tcagacctgt ctccctcatt caaaaaatat ttattatcga gctcttactt
241 gctaccagc actgatatag gcactcagga atacaacaat gaataagata gtagaaaaat
301 tctatatcct cataaggctt acgtttccat gtactgaaag caatgaacaa ataaatctta
361 tcagagtgat aagggttgtg aaggagatta aataagatgg tgtgatataa agtatctggg
421 agaaaacggt aggggtgtgga tattacggaa agccttccta aaaaatgaca tttaaactgat
481 gagaagaaaag gatccagctg agagcaaacg caaaagcttt ctcccttcca cccttcatat
541 ttgacacaat gcaggattcc tccaaaatga tttccacca tttcgccttc acagctctgg
601 cttgcagaat tttccacccc aaaatgttag tatctacggc accaggctcg cgagaatcct
661 gactctgcac ctcctcccc aactccattt cctttgcttc ctccggcagg cggattactt
721 gcccttactt gtcatggcga ctgtccagct ttgtgccagg agcctcgcag gggttgatgg
781 gattgggggtt ttccctccc atgtgctcaa gactggcgct aaaagttttg agcttctcaa
841 aatcttagag ccaccgtcca gggagcaggt agctgctggg ctccggggac actttgcgtt
901 cgggctggga gcgtgctttc caccgctgtg acacgcttcc ctggattggg taagctcctg
961 actgaaactt atgagtcctc tctgagtcac gggctctcgg ctccgtgtat tttcagctcg
1021 ggaaaatcgc tggggctggg ggtggggcag tggggactta gcgagtttg gggtgagtgg
1081 gatggaagct tggctagagg gatcatcata ggagttgcat tgttgggaga cctgggtgta
1141 gatgatggg atgttaggac catccgaact caaagttgaa cgcctaggca gaggagtgga
1201 gctttgggga accttgagcc ggcctaaagc gtacttcttt gcacatccac ccggtgctgg
1261 gcgtagggaa tccctgaaat aaaagatgca caaagcattg aggtctgaga cttttggatc
1321 tcgaaacatt gagaactcat agctgtatat tttagagccc atggcatcct agtgaaaact
1381 ggggctccat tccgaaatga tcatttgggg gtgatccggg gagcccaagc tgctaaggtc
1441 ccacaacttc cggacctttg tccttcctgg agcgatcttt ccaggcagcc cccggtccg
1501 ctagatggag aaaatccaat tgaaggctgt cagtcgtgga agtgagaagt gctaaaccag
1561 gggtttgccc gccaggccga ggaggaccgt cgcaatctga gagggccggc agccctgtta
1621 ttgtttggct ccacatttac atttctgcct cttgcagcag catttcgggt ttctttttgc
1681 cggagcagct cactattcac ccgatgagag gggaggagag agagagaaaa tgtcctttag
1741 gccggttctt cttacttggc agagggaggc tgctattctc cgcctgcatt tctttttctg
1801 gattacttag ttatggcctt tgcaaaggca ggggtatttg ttttgatgca aacctcaatc
1861 cctccccttc tttgaatggg gtgcccacc cccgggtcg cctgcaacct aggcggagcg
1921 taccatggcg tagacaggga gggaaagaag tgtgcagaag gcaagcccg aggcactttc
1981 aagaatgagc atatctcatc ttcccggaga aaaaaaaaaa agaatggtac gtctgagaat
2041 gaaattttga aagagtgcaa tgatgggtcg tttgataatt tgtcgggaaa aacaatctac
2101 ctgttatcta gctttgggct aggccattcc agttccagac gcaggctgaa cgtcgtgaag
2161 cggaaggggc gggcccgag gcgtccgtgt ggtcctcgt gcagccctc gcccagccg
2221 gttcttcctg gtaggaggcg gaactcgaat tcatttctcc cgctgcccc tctcttagct
```

```
2281 cgcggttgtt tcattccgca gtttcttccc atgcacctgc cgcgtaccgg ccactttgtg
2341 ccgtacttac gtcacttttt tcctaaatcg aggtggcatt tacacacagc gccagtgcac
2401 acagcaagtg cacaggaaga tgagtttttg cccctaaccg ctccgtgatg cctaccaagt
2461 cacagaccct tttcatcgtc ccagaaacgt ttcacacagt ctcttcccag tcgattccccg
2521 accccacctt tattttgatc tccataacca ttttgccgtg tggagaactt catatagaat
2581 ggaatcagga tggcgctgt ggctcacgcc tgcactttgg ctcacgcctg cactttggga
2641 ggccgaggcg ggcggattac ttgaggatag gagttccaga ccagcgtggc caacgtggtg
2701 aatccccgtc tctactaaaa aatacaaaaa ttagctgggc gtggtgggtg cctgtaatcc
2761 cagctattcg ggagggtgag gcaggagaat cgcttgaacc cgggaggcag aggttgcagt
2821 gagccaagat cgtgccacta cactccagcc tgggcgacaa gaacgaaact ccgtctcaa
2881 aaaaaggggg gaatcataca ttatgtgtc atttttgtcg ggcttctgtc cttcaatgta
2941 ctgtctgaca ttcgttcacg ttgtatatat cagtattttg ctccctttca tttagtatatg
3001 tccatcgatt gtatatccgt ccttttgatg gccttttgag ttgtttccca tttgcggtta
3061 tgaaataaag ctgtataaaa cattcttgta caattctttt tgtgatcata tgttttcgtg
3121 tttcttggag aaatacttag gaggggaatt gtggaggaag taaaaagtag ctgtattttg
3181 aactttttca gaagctctga gttttccaga gcggttgtag cattttacac tccaactagc
3241 aaggatatgg agttattatg gttgtgccac agccttccgg acattaggta tgtcagtcct
3301 tctaattgtg tatatccttg tggttgtaat ttacagttct ctattgacta aggatgttca
3361 gcattttttc atgtgcctat tggccattcg tattttgttt gtaaagtagc tcttcgagtc
3421 ttttacctgt tattttgggt tttttgtttg tttttattgt tcagttgtgg gactgcttta
3481 tactttctgg atacaagtc ttatcagatc catgagtcgt gaatgttttc tctgatctg
3541 ttgcgggcct atttgtttgc tttacagagt ttacagaatc ttaagaggag tggattaatc
3601 ttttttatgt tcagtatttg ccttgctcctg tttaggacat cttttttttt ttttttaacc
3661 ccagggtcat gaagatataa tcttaccatt tcttttagga cctttatggt ggtaagtttt
3721 acagtaaggt ccttaagcca ttaattaaat cttaaaatta attgtttatg gtgtgagggtg
3781 taggagtcag tctctgggat ctttctgtga tggaaatcca gttattctgt ctccacttgt
3841 tgaaatagga ttcctttctc tactgaatgc ttttaatttt aattatttta cagttggagt
3901 atagggttac catttttagt ctattttctt tttttctttg ttaatttttg agacagggac
3961 tcacactgtt gccaggtcta gagtacaatg gcacaatcaa ggcttactgc agcctcgaac
4021 ccctgggctc aagcagtcct ctagcagcct cagcagtagc tgggattact ccaccacacc
4081 cagctaacta ttttattttt ttgtattgac aggatctcac tatgttgccc aggctggtct
4141 caaactgtcg gcctcaagct ttcaccccat ctcgccctcc caaagtgtcg ggattacagg
4201 tgtgagccac catgcctgac ctcttagtgc tattttctat ttatctctc tgttctctgc
4261 tctctttaa cgttggagga agaaacagta cccatcttac acaaaactct cagaaaaacag
4321 aggaacagac tgggcgcggt ggctcatacc tgtaatctca gcactttggt acgctgaggc
4381 aggggatcat ttgaggtcgg gagttcgaga ccagcctggc caacacggcg aaaccccatc
4441 tctactaaaa tacaaaagta gctaggcgtg caccatacct gtaatgccag ttactcagga
4501 ggctgaggca caagaatccc ttgaacctgg gaagcggagg ttgcagtga ccgagattgc
4561 gccactgcac tccagcctgg gcaacagagt gagacctgt ctcagaaaaa aaaagaaaga
4621 aagaaaaaat agaggaatat ttcccaactt gttttcgaag ccaggataat cctggtacca
4681 aaaccaaaca aggacattat aagaaaagaa aatatagacc aatattcctg tttagcataga
4741 catgcaacag ctaaccaatt ttagcaaaac aaacctggtg atatagaaaa aaggataaat
4801 aggccagtcg cgggtggctc cgctgtaat cccagcactt tgggaggctg aggcaggcag
4861 atcacttgag gtcaggagtt tgagaccagc ctgaccaaca tggtgaaacc ccgtttctaa
4921 taaaaatata aaaatcaggc tgggcacggt ggctcacgcc tgtaatccca gcactttggg
4981 aggccgaggt gggcagatca cgaggtcagg agttcaagac cagcctgacc aatgtggtga
5041 aacgccatct ctactaaaaa tacgaaaatc agccggtgtg gtggcacctg cctgtaatcc
5101 cagctactca ggaggctgag gcagaattgc ttgaaccggg gaggcagagg ttgcagtga
5161 ccaagatcgt gccactgcac tccagcctgg gcgacagagc aagacttcat ctcaaaaaaa
5221 aaaaaaatta gctgggcatg gtggtgggca cctgaaatcc cagctactcg ggagtctgag
5281 gcaggagaat cgcttgaacc caggaggcag aagttgcact gagctgggat cacaccattg
5341 cactccagcc tgggcaacag agtgagactc catctcaaaa aaagaaaaag aaaaaggata
5401 aatacattct aaccaaataa tgtttatctc atgattgtag ctgattcaac attcaaaaat
5461 tggcctggtg cagtagctca ggctgtaat cccaacattt taggaggctg aggcaggaag
5521 atctcttgag cccaggattt caagaccagc ctgggcaaca tagtcagact ggtctttact
5581 ggggggaaaa aaatcagtc gtgtaattca ccacattaac aaagggaaac ataaaaaccc
5641 tatgatcatt tcaacagatg tagcaaaagc agttaatgat atcaacacat atgcatgatt
5701 acaaaccaac caacctcta gcaactaggg gaaaggaac ttaactagtt tgataacagg
5761 gcgtccacag tcggagttcc actagcagca tacataatgg tagaaaaact agtgctgctg
5821 ggggcgggtg ctcacgcctg taatgccagc gctttgggag gcctaggcgg gcggatcacg
```

5881 aggtcaggag atcgagactg tcttgactag catgctgaaa ccccgctctc actaaaaata  
5941 caaaaacaaa aaattagccg ggcattggtg cgggccccta tagtgccagc tactcgggag  
6001 gctgaggcga gagaatggcg tgaacccggg aggcggagct tgcagagcct agatcgtgcc  
6061 actgcactcc agcctgggtg acagagtggg acttcgtctc aaaaaaaaaa aaaaaaaaaa  
6121 aagaaaagaa aactcaacgc tttttcctct aagatcagga actagaaaag gatttgactc  
6181 tcacaacggt gataccatac tggagggttt aaccaggcaa gaaaaagaaa taatgagggc  
6241 cgggtgcggt ggctcaggcc tgtaatccca gcactttggg aagccgagac ggggtggatca  
6301 cgaggtcagg agatcgagcc atcctgggta acacgggtga accctgtctc tactaaatat  
6361 acaaaaaatt agccgggctg ggtggcgggc gcctgtagtc ccagctactc gggaggctga  
6421 ggcaggagaa tggcgtgaac tcagggggcg gagcttgagc tgagctgaga tcgagccact  
6481 gcactccagc ctggggcgaca gagcaagact gtgtctcaaa aaaaaaaaaa gaaaaagaaa  
6541 taatgattag tggcccgatg tctcacgcca gtaatcccag cactttggga ggccgagggtg  
6601 ggcagatcac ctgagggtctg gagttggaga ccagcctgac aaagatgggt aaacctcgtc  
6661 tctattaaaa tattaaaaaa atagccaggc gttggccggg tacagtgggt catgcctgta  
6721 accccagcac tttgggaggc cgagggtggg ggatcacctg aggtcaggag ttcaacacca  
6781 gcctggccaa catggtgaaa ccccatctct actaaaaata caaaattagc cgggcgtagt  
6841 ggcggggcgc tgtaatccca gctacttggg aggccttagc aggagaatcg cttgaacctg  
6901 ggaggcggag gttgtagtga gccgagattg caccattgca ctccagcctg ggtgacaaaa  
6961 gcaaaaaactc cgtctcaaaa aaaaaagaat tagccagggg tagtggtgaa cgcctgtagt  
7021 cccagctact caggaggcag aggcaggaga atcacttgaa ccccgagggc agaggttgca  
7081 gtgagccgag attgtcccat tgcactccag cctaggcgag aagagcaaaa ttccatgtca  
7141 aaaaaaaaaa aaaaaaagga aagaaaaaaa ataacgatta gaaaggaaga aatcaaacac  
7201 attcacagcc agtatgattc tatacatacc atggctcctaa tggggccagg cgtggtgggt  
7261 catgctgtaa tcctagcact tttaggaggc tgaggcagggt ggcttcctcg gaaccagctg  
7321 gccacatggt tgaaccccca actctaataa aaatacaaaa aatcagccag gcgtggtgag  
7381 ggcacctcta atcccagcta ctcaggaggc tgaggcagga gaattgcttg gacctgggag  
7441 gcagagggtg cagtgcgagc agatcgcgct attgcactcc agcctgggca acaagagtga  
7501 aactccggca ggggtgtgtc ttacgcctgt aatcccagca cttcgggagg ctgagccagg  
7561 ccgatcacct gaggtcagga gtttgagacc aacctaacat ggtgaaaccc cgtctctact  
7621 aaaaatacaa gaattagctg ggtgtagtgg tgggcgcctg taatcccagc tacttgggag  
7681 gctgagacag aagaattgct tgaacccagg aggtggagggt tgagtgagc tgagatcatg  
7741 ccattgcaca ccacgccggg caacagagcg agattccgtc tcaaaaaaaaaa aaaaaagatg  
7801 aaactctatc tcaaaaaaaaaa aaaaaagtcc taatggaaaa tccataaaaa gctaccaaaa  
7861 ctaataaata aatatagcag ggttgaggtt tacagggcaa tatagttatc cctctatctg  
7921 taggggcttg gttctgggac tcctcacaca ccaaaccac agatgtctaa gtcccatata  
7981 taagacggaa tagtatataa cctacacata tcctcccata tagtttaaat tatctagatt  
8041 acttacatta ccccatatac atgaaaaatg taatgtacat gcaagtatgt atgtaagtac  
8101 ttgtactata ttgtttaggg aatcactgga cagataggcc ttcaagactg ataccagcag  
8161 cactgttaa gattctggtc aggcctgccc ctggttgggg tctcagttga tctcattgcc  
8221 ttcccaccca gccaaaggga cctgcatttc tcttggctcc ctggccattt ggaaggccta  
8281 gttcagcctg gcacatttgt atcctgccc actgatgctg gtacccctgg gaaggctcctg  
8341 ctctgaaaaa cacggagatt ttagttgcta ctgaagattt gagagataaa gacagggaga  
8401 cctgtctgta gacctgtgtc cctccaagtg ggattgagac tttgggcccc ccatttcagg  
8461 acagcacctc ctggcctggt gactgaatag atccctgaag gaggtgtagt tgcattttag  
8521 gagggtgggt gggagcagta ccactgatcc gcactaaca tcaacagtt ctctctagaa  
8581 taataatata gaacaagtga aatagaacaa ttgcagaaag agctaacctt tgttgagctc  
8641 ttactgtgtg cccagcactt tcctcaactc tacatttccc ataatacata gactactagg  
8701 taggcggggc ttgggggctc acgcctgtaa tcccagcact ttaggaggcc aaggggggtg  
8761 gatcacctga ggtcgggagt tcaagaccag cctgactaac atggtgaaac ccgctctcta  
8821 ctagaagtac aaatttagcc aggtgtggtg gcacatgctt gtagtcctag ctactcagca  
8881 ggctgaggca ggagaatcat ttgaatccgg gaggaggttg cagtaagcgg agatagtgcc  
8941 actgtactcc agcctgggca ataagagctg agactccgtc tcaaaaataaa ataaaataaa  
9001 ataaaataaa ataaaataaa aaaaaaaaag aaaagagcct gccattaaag gagctgtttg  
9061 gtaggggatg ttttgtcagt gcaaacaca gaaaagtggg ctgggcacag tggttcatgc  
9121 ctgtaatccc agcactttgg gagggcaagg cgggcggatc acctgaagtt gggagttcaa  
9181 gaccagcctg accaatatgg agaaaccccg tctctactaa aaatacaaaa ttagccgggc  
9241 gcagtggccg atgcctgtaa tcccagctac tcgggagggt gaggcaggag aatcgcttga  
9301 acctgggagg cagaggttgc ggtgagccga gatcgacca ttgactcca gcctggacga  
9361 gagcaaaact ctgtctcaaa aaaaaaaaaa aacagaaaag tgtaacaaac acttacagta  
9421 ggcattgttc ttagcaaatc tgatgacaaa tttggcataa agaaagagag catccctgaa

9481 aaaaaaaaaa agaaaaagaa agagagcatc ctgcctgggc aacatagtga aacctgcct  
9541 ctacaaaaaa actcaaaaat tggccgggtg cagtggctca cacctgtaat cccagcactt  
9601 tgggagtcgg aggcgggagg atcacctgag gtcaggagtt cgaaaccagc ctggccaaca  
9661 tggcaaaacc ccatctctac taaaaataca aaaaattaat caggcgcat tggggcgcc  
9721 tgtaatccca gctactcagg aagttgaggg aagaggatcg cttgatactg ggagggtggg  
9781 gttacagtga gtcgagatca caccactgca ctctagcctg ggtgacaggg cgagactccg  
9841 tctccaaaaa aaaaaagaaa aagaaaaaga ctaaaaaatt agccaggcag gcctctgtgg  
9901 tcccagctac ttgggagggt gaggcaggag aatcactgag cccaggagtg gcaggctgta  
9961 gtgagccatg attgcaccac tgtaccctag cttgggcttc aaagcaagac cctgcctcaa  
10021 aagaaaaaag aaagaaagaa agaacatggc gggccaggca cagtggctca cacctgtaat  
10081 cccagcgctt tgagaggccg aggcagggtg atcacaaggt caggagt tcc acaccagcct  
10141 ggccaacatg gtgaaaccct gtctctacta aaaatacaaa aaatcagcag gcagggtggg  
10201 aggggcctgt aatcccagct actcgggagg ctgaggcagg agaattgctt gaaaccagaa  
10261 ggcagagggt gcagtgagcc tagactgcac cactgcactc cagcctgggc gaaaagagcc  
10321 aaactccatc tcaaaaaaca acaaaaaaaa caaaacatgg aaaaacatgg cagcctttga  
10381 aagcttgtct gggagaagggt gcgatgatgg ttgcataact tcgtgcaaga tgctgttcca  
10441 cacaggggct gccccttgct cttctcgct ctcttaacct ctcatataac aggcttgtgt  
10501 gttatgcaca tttattgagc ccaagcagggt gcaaggcatt gtgatctaact actttggtca  
10561 gcaagacaac aagatagatc actgcctgc ccttaggaag tgtatatgct attagaggaa  
10621 acagataaaa taaacaagga aaagtatcag acaatgtaag tgctatgaga atgcaaatga  
10681 ggtgatgtga attaaaatag gatgacttaa gtctgcacgg aaggccccta ccccatgtt  
10741 cctggctagc caaggaacca ccagttgatt agcagagaag ggcagcccgt ctagctagag  
10801 cttttgggga agagggagtg gttgttaaga gatgagatta aagaagccga gacgggccct  
10861 tcgtgagggg ggggtgtaat gcaggctgga ggagtgtccg aagagaattgg gcaggtgagc  
10921 ggtgagacag ttgttcttcc agaagctttg cagtgaagg aatcaaagaa atggagccgt  
10981 gtatcagggt gggaagggtg ggggccaagg ggggtgtcct cccatacag agattgcagg  
11041 ctgagaatga ctatatcctt gttaacagga ggtgggagca gggcacggta gctcacacct  
11101 gtaatcttgg cacttttagga ggcggaggcg ggccgatcac ctgaagtaag gagtctgaga  
11161 ccagcctggc caacatgcaa agcctgtct ctactaaaaa taaaaaatt agctgggtgt  
11221 ggtggtactc gcctgtaatc ccagctactc gggagactga ggcaggagaa tggcctgaac  
11281 ccggaaggtg gaggttgtag tgagctgaga tcatgccact gtgctccagc ctaggtgaca  
11341 gagagagact ccatctcaaa aaaaaaaa aatacaggaa gggagttggg aatagggtgc  
11401 acatttagga agtcttgggg atttaagtggt gggaagggtg gaagtccctc tctgattgtc  
11461 ttttctcaa agaagtgcag gctggtgtg ggggtgggca ggagtgttg ggtgtggtg  
11521 aacatttga agagagaatg tgaagcagcc attcttttcc tgctccacag gaagccgagc  
11581 tgtctcagac actggcatgg tgttggggga ggggcctcct cctctgcagg cccaggtgac  
11641 ccagggttgg aagcgtctca tcttgatcc ccacttttcc tcttgcaaca ~~cccagactgc~~ 2  
11701 ~~cttccggtc~~ actgccatgg aggaaccgga gtcagatcct agcgtcgagc cccctctgag 35  
11761 ~~ccaggaaaca~~ ttttcagacc tatggaaact gtgagtggat ccattggaag ggcaggccac  
11821 caccgccgac ccaaccccag cccctagca gagacctgtg ggaagcgaag attcatggga  
11881 ctgactttct gctcttgtct ttcagacttc ctgaaaacaa cgttctgtta aggacaaggg  
11941 ttgggctggg acctggaggg ctggggggcg tggggggctg aggacctggg cctctgactg  
12001 ctcttttcac ccatctacag tccccttg cgtcccaagc aatggatgat ttgatgctgt  
12061 ccccgagcga tattgaacaa tggttcactg aagaccagg tccagatgaa gctccagaa  
12121 tgccagaggc tgctccccgc gtggccctg caccagcagc tccacaccg gcggccctg  
12181 caccagcccc ctctggccc ctgtcatctt ctgtccctc ccagaaaacc taccagggca  
12241 gctacggttt cgtctgggc ttcttgcat ctgggacagc caagtctgtg acttgacag  
12301 tcagttgccc tgaggggctg gcttccatga gacttcaatg cctggccgta tccccctgca  
12361 tttcttttgt ttggaacttt gggattcctc ttcaccctta ggcttctgt cagtgtttt  
12421 ttatagttta cccacttaat gtgtgatctc tgactcctgt cccaaagttg aatattcccc  
12481 ccttgaattt gggtttttat ccattccatc acaccctcag catctctcct ggggatgcag  
12541 aacttttctt tttcttcatc cacgtgtatt ccttggcttt tgaaaataag ctctgacca  
12601 ggcttggtgg ctacacactg caatcccagc actctcaaag aggccaaagg aggcagatca  
12661 cctgagcccc aggagttcaa gaccagcctg ggtaacatga tgaaacctcg tctctacaaa  
12721 aaaatacaaa aaattagcca ggcattgggtg tgcacaccta tagtcccagc cactcaggag  
12781 gctgaggtgg gaagatcact tgaggccagg agatggaggc tgcagtgagc tgtgatcaca  
12841 ccactgtgct ccagctgag tgacagagca agaccctatc tcaaaaaaaa aaaaaagaa  
12901 aagctcttga ggtgtagacg ccaactctct ctagctcgct agtgggttgc aggaggtgct  
12961 tacacatgtt tgtttctttg ctgccgtgtt ccagttgctt tatctgttca cttgtgccct  
13021 gactttcaac tctgtctcct tctcttctt acagttactc cctgcctca acaagatgtt



```
13081 ttgccaactg gccaaagacct gccctgtgca gctgtgggtt gattccacac ccccgcccg
13141 caccgcgctc cgcgccatgg ccatctacaa gcagtcacag cacatgacgg aggtgtgag
13201 gcgctgcccc caccatgagc gctgctcaga tagcgatggt gaggagctgg ggctggagag
13261 acgacagggc tggttgcccc ggggtccccag gcctctgatt cctcactgat tgctcttagg
13321 tctggccccct cctcagcacc ttatccgagt ggaaggaaat ttgcgtgtgg agtatttgga
13381 tgacagaaac acttttctgac atagtgtggt ggtgccctat gagccgcttg aggtctggtt
13441 tgcactgggg gctctctggga ggagggttta agggtgggtg tcagtggccc tccgggtgag
13501 cagtaggggg gctttctcct gctgcttatt tgacctccct ataaccccat gagatgtgca
13561 aagtaaatgg gttaactat tgcacagtgt aaaaaactga agcttacgag gctaagggcc
13621 tccccctgctt ggctgggcgc agtggctcat gcctgtaatc ccagcacttt gggaggccaa
13681 ggcaggcgga tcacgaggtt gggagatcga gaccatcctg gctaacggtg aaaccccgctc
13741 tctactgaaa aatacaaaaa aaaattagcc gggcggtggtg ctgggcacct gtagtccag
13801 ctactcgga ggctgaggaa ggagaatggc gtgaacctgg gcggtggagc ttgcagttag
13861 ctgagatcac gccactgcac tccagcctgg gcgacagagc gagattccat ctcaaaaaaa
13921 aaaaaaaaaag gcctcccttg cttgccacag gtctcccaa ggcgactgg cctcatcttg
13981 ggctgtggtt atctcctagg ttggctctga ctgtaccacc atccactaca actacatgtg
14041 taacagttcc tgcattggcg gcatgaaccg gaggcccatc ctcaccatca tcacactgga
14101 agactccagg tcaggagcca cttgccaccc tgcacactgg cctgctgtgc cccagcctct
14161 gcttgccgct gacccctggg cccacctctt accgatttct tccatactac taccatcca
14221 cctctcatca catttcgggc gggaatctcc ttactgctcc cactcagttt cctttctct
14281 ggctttggga cctcttaacc tgtggcttct cctccacct cctggagctg gagcttaggc
14341 tccagaaagg acaagggtgg ttgggagtag atggagcctg gttttttaa tgggacaggt
14401 aggacctgat ttccttactg cctcttgctt ctcttttct atcctgagta gtgtaactct
14461 actgggacgg aacagctttg aggtgcgtgt ttgtgcctgt cctgggagag accggcgcac
14521 agagggaag aatctccgca agaaagggga gcctcaccac gagctgcccc cagggagcac
14581 taagcgaggt aagcaagcag gacaagaagc ggtggaggag accaagggtg cagttatgcc
14641 tcagattcac ttttatcacc tttccttgcc tctttcctag cactgccccaa caacaccagc
14701 tctctcccc agccaaagaa gaaaccactg gatggagaat atttcacctc tcaggtacta
14761 agtcttggga cctcttatca agtggaagt ttccagtcta acactcaaaa tgcggttttc
14821 ttcttgactg ttttacctgc aattggggca tttgccatca gggggcagtg atgctcaaa
14881 gacaattggt cctggttgta gctaactaac ttcagaacac caacttatac cataatatat
14941 attttaaagg accagaccag ctttcaaaaa gaaaatagtt aaagagagca tgaaaaatggt
15001 tctatgactt tgctgatac agatgctact tgacttacga tggagttaact tctgataact
15061 cgtcgtaatg tgaaatattg aaatattgta agttgaaat ggatttaata cacctaactc
15121 aaggacatc atagcttagc ctacgtgct ttttttttt ttttttttt ggagacagag
15181 tctcactctg ctaccaggc tggagtgcag tggcgggatc tcggctcact gcaacctccg
15241 ccttctgggt tcaagcgatt ctctgcctc agcccactga gtagctggga ttacaggcac
15301 ctgccccgac gccagctaa ttttttgta tttatttct ttttttttag tagagataga
15361 atttcaccat gttggccagg ctagtctcga actcctgacc ttgtgatctg cctgccttgg
15421 cctcccaaag tgctgggatt acaggcgtga gccaccgcac ctggcctgcc tagcctactt
15481 ttattttatt tttaatggag acagcatctt gctctgttgc ccaggctgga ttacagtgat
15541 gtgatcatag ctcatatac cctcctgggc tcaagcaatc cccctaactc tgcctcccca
15601 gtagctagga ccacaggcat acaccacct acccagctaa tttttaaaat tttttgtaga
15661 tagatagagt ctactatgt tgcccaggct ggtctctagc ctactttttt gagacaagggt
15721 cttgctctgt caccaggct ggatagagt cagtagtgca gtcacagctc actgcagcct
15781 ccacctccca ggctccatcc atcctcccag ctacgcctcc caagttgctt caactacagg
15841 cctgcaccac catgctggc taattttttt ttattttatt ttattttatt ttattttatt
15901 ttttgagact cagtctcact ctgtgcctt aggtggagt gcagtggcct gatctcggct
15961 cactgctaac ctctgcctcc tgggtttcaa gtgattctcc tgctcagcc tccgaatag
16021 ctaggactac aagcgctgc taccacgccc ggctaatttg tgtattttta gtagagacag
16081 ggtttcacca tgttgccag gctggtctcg aacttctgac catgtgatcg ccgctcggc
16141 ctcccaaagt gctgggatta caggtgtgag ccaccacgcc cggctaattt ttattttatt
16201 atttaaagac agagtctcac tctgtcactc aggttagagt gcagtggcac catctcagct
16261 cactgcagcc ttgacctccc tgggtccgg tgatttcacc ctcccaagta gctaggacta
16321 caggcacatg ccacgacacc cagctaattt tttattttct gtgaagtcaa ggtcttgcta
16381 cggtgccccat gctggtatca aaccctggg ctcaatcaat ccttccacct cagcctcccc
16441 aagtattggg gttacaggca tgagtacca cactcagccc tagcctactt gaaacgtggt
16501 cagagcatct aagttaccct acagttgggc aaagtcactc aacacaaagc cctttttata
16561 gtaataaaat gttgtatata tcatgtgatt tattagatat tgttactaaa agtgagaaac
16621 agcatgggtg catgaaagga ggcacagtcg aagccaggca cagcctgggc gcagagcgag
```

```
16681 actcaaaaaa agaaaaggcc aggcgcactc tcacgcctgt aatcccagca tttcgggagg
16741 ctgaggcgagg tggatcacct gaggtcagga gttcaagacc agcctagcca acatggtgaa
16801 acccgcgtctc tactaaaata caaaaattaa ccgggcgtga tggcagggtgc ctgtaatccc
16861 agctacttgg gaggttgagg caggagaatc gcttgaacca ggaggcgagg gttgcaggga
16921 gccaagacgg cgccactgca ctccagcctg ggcatagag tgagactccg tctcagaaaa
16981 aaaagaaaaa aaacgaggca cagtcgcata cacatgtagt cccagttact tgagaggcta
17041 aggcaggagg atctcttgag cccaagagtt tgagtccagc ctgaacaaca tagcaagaca
17101 tcatctctaa aatttaaaaa agggccgggc acagtggctc acacctgtaa tcccagcact
17161 ttgggagggtg gaggtgggta gatcacctga cgtcaggagt tggaaaccag cctggctaac
17221 atggtgaagc cccatctcta ctaaaaacac aaaaattagc cagtgtgaga cacgttgagt
17281 ccacgtactc ggaggctgag gcacaagaat cacttgaacc ccagaggcgg agattcgaat
17341 cagccaagat tgcaccattg cactcccgcc tgggcgacga gagtgagacc ccattctcaa
17401 ataaataaat aaatatTTTTT aaaagtcagc tgtataggta cttgaagtgc agtttctact
17461 aaatcgatgt tgcttttgat ccgtcataaa gtcaaacaat tgtaacttga accatctttt
17521 aactcaggta ctgtgaatat acttacttct cccctcctc tgttgctgca gatccgtggg
17581 cgtgagcgct tcgagatggt ccgagagctg aatgaggcct tggaaactca ggatgccag
17641 gctgggaagg agccaggggg gagcagggct cactccaggt gagtgcacct agcccttac
17701 tggccctact cccctgcctt cctagggttg aaagccatag gattccattc tcctcctgcc
17761 ttcattggtca aaggcagctg acccatctc attgggtccc agccctgcac agacattttt
17821 ttagtcttcc tccggttgaa tcctataacc acattcttgc ctccacgtag tatccacaga
17881 acatccaaac ccagggacga gtgtggatac ttctttgcca ttctccgcca actcccagc
17941 ccagagctgg aggtctcaa ggggccta atattgtgta tactgaatac agccagagtt
18001 tcaggtcata tactcagccc tgccatgcac cggcaggctc taggtgacct ccgtcaaact
18061 cagtttctct atataaaaa tggggttaagg gggccgggcg cagtggctca cgaatccac
18121 actctgggag gccaaaggcg gtggatcacc tgaggctggg agtttgagcc cagcctgacc
18181 aacatggaga aaccccatct ctactaaaaa taaaaagta gccgggcgtg gtgatgcag
18241 cctgtaatcc cagctacctc ctccggaggc tgaggcagga gaatcgcttg aaccggggag
18301 gcagagggtg cgtgagctg agatctcacc attacactcc agcctgggca acaagagtga
18361 aactccgtct caaaaaagta taataaagta aaatggggta aggggaagatt acgagactaa
18421 tacacactaa tactctgagg tgctcagtaa acatatttgc atgggggtgt gccaccatct
18481 tgatttgaat tcccggtgtc ccagccttag gcccttcaa gcattggtca gggaaaaggg
18541 gcacagacct tctcactcat gtgatgtcat ctctctctcc tgcttctgtc tctacagcc
18601 acctgaagtc caaaaagggt cagtcctacc cccgccataa aaaactcatg ttcaagcag
18661 aagggcctga ctcagactga cattctccac ttcttggtcc ccactgacag cctccctccc
18721 ccattctctc ctccctgcc attttgggtt ttgggtcttt gaacccttgc ttgcaatagg
18781 tgtgcgtcag aagcaccag gacttccatt tgctttgtcc cggggctcca ctgaacaagt
18841 tggcctgcac tgggtgtttg ttgtggggag gaggatgggg agtaggacat accagcttag
18901 attttaaggt ttttactgtg agggatgttt gggagatgta agaaatgttc ttgcagttaa
18961 gggttagttt acaatcagcc acattctagg taggtagggg cccacttcac cgtactaacc
19021 agggaagctg tccctcatgt tgaattttct ctaacttcaa ggcccatatc tgtgaaatgc
19081 tggcatttgc acctacctca cagagtgcac tgtgagggtt aatgaaataa tgtacatctg
19141 gccctgaaac cactttttat tacatggggt ctaaaacttg accccttga ggttgctgtg
19201 tccctctccc tctccctgtt ggctgggtgg ttggtagttt ctacagttgg gcagctgggt
19261 aggtagaggg agttgtcaag tctgtctggc ccagccaaac cctgtctgac aacctcttgg
19321 tcgaccttag tacctaaaag gaaatctcac cccatccac accctggagg atttcatctc
19381 ttgtatatga tgatctggat ccaccaagac ttgttttatg ctcagggtca atttctttt
19441 tctttttttt tttttttttt cttttcttt gagactgggt ctcgctttgt tgcccaggct
19501 ggagtggagt ggcgtgatct tggcttactg cagcctttgc ctccccggct cgagcagtc
19561 tgectcagcc tccggagtag ctgggaccac aggttcatgc caccatggcc agccaacttt
19621 tgcattttt gttagagatg ggtctcacag tgttgcccag gctgggtctc aactcctggg
19681 ctcaggcgat ccacctgtct cagcctccca gagtgtctgg attacaattg tgagccacca
19741 cgtggagctg gaagggtcaa catcttttac attctgcaag cacatctgca ttttcccc
19801 acccttcccc tccttctccc tttttatata ccatttttat atcgatctct ttttttcaa
19861 taaaactttg ctgccacctg tgtgtctgag ggggtgaacg cagtgcaggc tactggggct
19921 agcagggtgca ggggtgagtg aggaggtgct ggggaagcag cacctgagtc tgcaatgagt
19981 gtggactggg gggcccagtg cccgggttcc gggaggggaa caaaggctgg agactgggtc
20041 agtctgcggg ctgcatgaca acaaggagg ggggtggctc attcataact caggaaccaa
20101 ccgtcccccc tccccctccg ccacggctgt cacaaggttc tctgcctccc ctgcttctag
20161 gattgggctg cttccccctc gccagcctct caccaaggat tacgggattt aaatgctg
20221 atttacgaag gctgagcctc cagggtggcc atcttctgctc atcagaagtg gcaggatacc
```

20281 tgggttccaa ggggaacaggg tgg  
//

Revised: July 5, 2002.

[Disclaimer](#) | [Write to the Help Desk](#)  
[NCBI](#) | [NLM](#) | [NIH](#)

Jan 21 2003 18:08:12